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ABSTRACT

Academic work carried out through learning contracts at Empire State College is described. Learning contracts are defined and examples are given. Faculty roles, educational advantages, and implementation methods are discussed. (MLH)

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CONTRACT LEARNING

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SE020 186

CONTRACT LEARNING

"How can the learning process be structured to address effectively the educational needs of individual students?" This question represents one of the major areas of discussion in modern higher education. It appears that at least one possible answer lies in the utilization of learning contracts between students and faculty members.

A number of colleges in the United States today are utilizing learning contracts as part of their programs.[1] The term "learning contract," however, has been applied to the documentation of several quite different kinds of educational processes. For example:

(a) At New College (Alabama) and Ottowa University (Kansas), a learning contract is used to specify the overall graduation requirements for an individual. When the "terms" of the contract are fulfilled, a degree is awarded.

(b) Some individual faculty (e.g., references 2 and 3) have used learning contracts in an attempt to provide an alternative structure for a group of students taking an existing course.

(c) At Minnesota Metropolitan State College and at Empire State College, learning contracts provide structure over time for individualized academic work for each student. They are constructed within the framework of an individualized degree plan, which may also include learnings gained prior to enrolling in the college. In the present paper, "learning contract" will be used in this context.

This paper reports on the results of experience at Empire State College of the State University of New York, where all academic work by students is described and carried out through learning contracts. A brief overview of Empire State College is presented in the Appendix.

DESCRIPTION OF THE METHOD

At Empire State College, a learning contract is a written agreement, developed jointly between a student and a faculty member, which describes the nature and amount of work to be completed in a designated time. Although the format may vary, a learning contract should include:

a. An initial description of the intended scope of the student's work;

b. The specific goals and purposes that the work is supposed to accomplish, and the time stipulated for the work;

c. A description of the learning activities to be carried out, including all resources to be developed or used;

d. The criteria which will be used to evaluate successful completion of the work or achievement of the purposes.

The scope and objectives of the work are developed by the student and faculty member during an initial meeting or series of meetings. The content of the contract and the procedures surrounding it are discussed; these can vary greatly depending upon the nature of the material to be studied, as well as upon the background and ability of the student. A general organizing framework for the contract is agreed upon, either explicitly or implicitly. Learning contracts can be organized to explore a field or area, or to incorporate specific disciplinary study, thematic or project/problem-oriented study, or study in preparation for professional practice.

The discussion of appropriate learning activities through which the contract objectives are to be realized offers an unusual educational opportunity for both faculty and students. Paths can be designed through which faculty can assist students to develop and maximize their own abilities and special learning styles. In addition, during the contract design stage, it may become clear that for certain student-activity combinations, the learning operations will require a specified step-by-step procedure; at other times or for other combinations, the contract might be characterized by a high degree of flexibility.

Students can work directly with a faculty member; they can work with a knowledgeable person outside of the college; they can engage in independent study or group study; or they can participate in residential seminars and workshops.

A wide variety of learning resources can be considered, including work and field experiences in businesses, industry, hospitals, governmental and social agencies, and public and private community organizations; packaged modular materials; college courses and laboratory work; research in libraries, museums, galleries and concert halls; and media material of all kinds.

The evaluation of the results of the learning activities can include elements which are oral, written, or performance-based; which are product or process-focused; which are faculty or student derived. The important point is that, in all cases,

these elements should relate directly to contract goals, and should result in evidence that can provide public representation of the student's accomplishment. In addition, ongoing student-faculty dialogue, which may be written into the contract as a series of checkpoints, serves as a continuing evaluation of progress during the course of the contract work.

Learning contracts are not "cast in concrete." If it becomes clear, as a student begins contract work, that additional preparatory work is necessary before the main topics can be addressed; or if the student becomes particularly interested in one facet of the work, and wishes to shift direction in order to study that topic in greater depth, then the contract can be amended to reflect these changes. Alternatively, a new contract can be prepared, reflecting progress to date and including new objectives, learning activities and evaluation mechanisms.

ROLE OF THE FACULTY MEMBER

The role of the faculty member who works with contract learning is modified somewhat from the role of a traditional college faculty member, although the elements of the job descriptions sound similar. In each case, faculty are usually responsible for advising students, identifying and developing learning resources, developing curricula, providing instruction and evaluating outcomes. A faculty member working with students under learning contracts, will, at one time or another, need to do all of these things. The direction and emphasis, however, will be different than that of a traditional college faculty member. For example, student advisement becomes a major part of the job. Good planning is crucial for student success, so the faculty member must not only assist students in assembling contracts that are clear with regard to specific objectives, but must insure that each contract moves the student in the direction of his or her long range goals.

The identification and development of specific learning resources also occupies a large part of the job. Since one of the major advantages of learning contracts is the ability of students to take advantage of their own individual learning styles, the faculty member must become aware of all of the available resources of the University, the community and the region. The implication

here is that the faculty member will usually try to capitalize on what is available, rather than trying to produce new learning materials.

It is probably not possible to describe "the" way in which a faculty member operates with students when using learning contracts. At certain times, it is appropriate for the faculty member to serve as the primary source of instruction for students. He may help design the contract, suggest resources, formulate problems, answer questions, and evaluate outcomes. At other times, the faculty member may serve the managerial function of bringing together the student learner with outside resource persons who can assist the mentor and student in the planning and evaluation of the contract activities. There appears, then, to be a spectrum of functions, with one end perhaps being labeled "tutor" and the other end perhaps being labled "facilitator." The faculty member's function may therefore be described by different points along the "spectrum" when working with different students, or with the same student at different times.

EXAMPLES AND DISCUSSION

Three Empire State College learning contracts are included in the appendix. They are not intended to be seen as "models", but are included for the purpose of illustrating some of the points described in the previous sections. The contracts record the real work of real Empire State College students, with only names and personnel data removed. Along with each contract is included the evaluation document for that contract. The Empire State College Digest and Evaluation is prepared by the mentor subsequent to a student-mentor evaluation conference at the completion of a contract. It indicates to what extent and in what ways the student has achieved his or her purposes and the College objectives. It is intended to serve as a complete record of what the student learned, how the material was handled and where it fits into the overall degree program. The Digest and Evaluation becomes a permanent part of the student's record, and is the official credential of the student for the contract period.

Several general statements about these sample contracts may be made. In order to design these documents, considerable planning and discussion took place between the student and the mentor. In large measure, the planning occurred in the broader context of the overall degree program plans of the student. The contracts went through several draft stages, as the student and mentor firmed up terminology and set up necessary resources and arrange-

ments, before they were submitted to the appropriate academic administrator for recommendations and approval.

In each case, the contracts shown represent an effort by the student to address a perceived gap in content or proficiency level in his area of concentration (comparable to a standard college "major"). All three of the students whose contracts are shown are employed in scientific or technical positions, and an examination of each set of general and specific purposes shows the strong influence of career and professional goals upon the topics chosen for study.

Student A, for example, sought to increase the depth of his theoretical base in spectroscopy, an area in which he was already a highly competent industrial practitioner. The mentor, who served as the primary resource person, selected several topics for study from the general realm of modern physics, which the student covered in considerable detail. Of primary interest to the student was his ability to apply theory to his own industrial situation; the contract was able to capitalize on this by utilizing spectral interpretation as one method of evaluation.

Student B wished to carry out formal study in community and urban planning, an area of concern to him for many years as part of his position with a county highway department. In this case, no one on the Empire State College faculty in his region had the appropriate expertise to plan and evaluate such a contract, so an

outside resource person was asked to assist. The resource person, a part-time faculty member at a local community college, served in the following ways:

1. Initial planning - helped to plan the total contract, including purposes, learning activities and evaluation methods;
2. Periodic progress evaluation - met with student twice during the contract period to help assess progress and to suggest direction;
3. Final evaluation - provided final written evaluation based on criteria initially written into the contract.

The resource person was paid for her services at an hourly rate from college accessory instruction funds.

Student C, after fourteen years in technical and supervisory positions in communications electronics, had begun a new career path within his company in the field of data processing. As part of his first contract, he sought to develop for himself a set of competencies that would define the expectations of a concentration in computer science. Concurrently with his exploration of the field, he also sought to address a job-related need by learning a specific computer language. He took a commercially available course in the language, and utilized the computer facility at his company for practice and applications.

EDUCATIONAL ADVANTAGES

A major educational advantage of contract learning is the ability to involve students in the organization of their own work. Planning a contract is, in itself, a learning experience. Students must think about their own goals, the relevance of the area being considered for study, the objectives of the college, and perhaps the changing needs of a profession. Where contract content is not initially preset, the personal involvement of the student in defining objectives and developing learning activities can help the student to develop a more organized approach to his or her own study over time. In addition, the guidelines contained in well planned contracts provide a firm "structure" for students, enabling them to assess their own progress as they carry out the learning activities.

Another educational advantage of contract learning is the ability to assist students to become capable of self-directed learning. Ongoing research at Empire State College[4] suggests that students may vary in the degrees of independence for contract design, contract implementation, and contract evaluation. For example, many students initially rely on their mentors for structure and guidance in contract preparation, but need less structure when carrying out contract activities. In addition, the preliminary results indicate that students may become able to work more independently over time as they complete one, two, or more learning contracts.

APPLICABILITY TO STUDENT AUDIENCES

Data compiled at Empire State College indicates that contract learning seems a particularly well-suited format for a certain type of student: the older, working, married adult.[4] Often carrying heavy work, family and community responsibilities, this student generally has high motivation to obtain a degree. The student may have attended several colleges some years ago, but now needs an educational setting outside the constraints of the typical classroom and campus. He or she needs access to education that fits within a busy daily schedule, that permits independent self-pacing, and that provides a challenging evaluation of the learning that occurs. The contract learning/mentor system fits these learning conditions well. Colleges considering or already operating adult education, continuing education, or independent study programs might consider the demonstrated educational benefits to the older adult student that come from a contract learning approach.

However, it should not be assumed that this method is useful only for the adult learner. The opportunities for flexibility and self-directed learning inherent in learning contracts might facilitate the development of intellectual skills (problem solving, scientific inquiry, learning how to learn, developing habits of life-long learning) in a traditional college-age group. Indeed, Peterson[5] states that the development of the above skills is considered of greater importance

(but far more difficult to achieve) than the development of academic subject competence, by faculty members of traditional colleges.

The use of learning contracts at Empire State College to provide structure for independent study may also have broader applicability for traditional college-age groups. Dressel and Thompson[6] define independent study as the end of a path which requires a gradual increase in the amount of independence. They submit a list of experiences, moving from less to greater independence, that are quite suitable for existing colleges to implement, using learning contracts. The list includes, in part: participation in a course in which class meetings are reduced and the number of oral and written reports is increased; participation in a course in which some portion of the class work is done outside of class and subjected to evaluation in the same manner as that covered in class; participation in a course in which students are encouraged to develop individual projects beyond course requirements and are granted one or more additional credits for their completed work; selection of a course and completion of all requirements for it without class attendance; development of a project to be completed while absent from the campus (e.g., during the summer); demonstration of ability to collaborate with other students on a project and to carry out some portion of that project as agreed upon by

the group; research on technical or specialized problems in which some scientific, problem-solving methodology is adapted, or created and used by the student; creative work in the arts, humanities, or sciences; selection and analysis of work relating to some idea, theme, or problem, or to sequential development of increased insight or understanding of a problem or phenomenon. Many of the parts of the above suggested sequence of independent study experiences can be successfully structured using the method of contract learning.

IMPLICATIONS FOR COLLEGE FACULTIES

As college admissions become more open, faculty increasingly face students with an enormous range of interests, skills, learning styles, learning rates, and self-confidence. The learning contract method has a great potential for personalizing learning, since the one-to-one human interaction provides the opportunity to adapt flexibly to individual needs. What is necessary is an experienced, resourceful, and mature group of faculty, committed to the ideal of independent learning. For those students who initially exhibit doubt, or who find it difficult to perform without assistance, faculty must be willing to put in extra time. The assistance provided must serve to create the conditions necessary to promote self-confidence and proficiency in self-direction, rather than serve only to resolve the immediate problem. Many college faculty already operate in the above general ways. Faculty who utilize Audio-Tutorial methods, the Personalized System of Instruction, and Computer Assisted Instruction, actively seek to individualize learning rates and to increase student self-confidence while raising levels of skills and knowledge. For such faculty, utilization of the contract learning method may represent only a moderate rearrangement of structure, and only a small rewording of educational philosophy.

But what may be the strongest appeal to faculty members of the learning contract method is the great potential for

intellectual stimulation and excitment arising from direct faculty-student interaction. Students become interested and eager when the learning process can truly be tailored to their individual needs. Each student provides a new challenge, and the faculty member has the opportunity to assist and observe the intellectual growth and development of students over time.

CONCLUSIONS

The use of learning contracts can provide an effective structure within which to tailor education to the needs and goals of individuals. Their use by educators and students permits the design of educational programs that can bring learning and life closer together. They represent a way to closely involve students in all stages of their own education. At Empire State College, learning contracts have been demonstrably effective in structuring the learning process for people interested in a wide variety of areas, from the humanities, social sciences, and fine arts to the physical and life sciences and technologies.

REFERENCES

1. The following list of colleges known to be using learning contracts in some parts of their program is undoubtedly incomplete. The author apologizes in advance for any omissions.
   Community College of Vermont
   New College, Alabama
   Johnston College, University of Redlands, California
   New College, Florida
   Ottawa University, Kansas
   Hampshire College, Massachusetts
   Minnesota Metropolitan State College
   Empire State College, New York
   Wilmington College, Ohio
   Brown University, Rhode Island
   University of South Carolina,
   Evergreen State College, Washington
   Fairhaven College, Washington
   Davis and Elkins College, West Virginia
   College of Racine, Wisconsin

2. R.D. Findlay, "Contracts in Teaching", Proceedings of Third Annual Frontiers in Education Conference, p. 354 (1973).

3. R.M. Barlow, "An Experiment with Learning Contracts", Journal of Higher Education, V. XLV, No. 6, p. 441 (June 1974).

4. T. Lehmann, "Educational Outcomes from Contract Learning at Empire State College", Presented at the 30th National Conference on Higher Education, American Association for Higher Education, Chicago, Illinois (March 1975). Available from Empire State College, Office of Research and Evaluation, Saratoga Springs, N. Y. 12866.

   Other research results from this project presented at the above conference and similarly available are:
   E. Palola, "Administering Individualized Education"
   R.C. Debus, "Cost Analysis for Contract Learning";
   A.P. Bradley, "A Role for Faculty in Contract Learning: Toward a Theory of Nontraditional Faculty Development";
   J. Lindquist, "Implementing Contract Learning Innovation Process in Higher Education".

5. R. Peterson, "Goals for California Higher Education: A Survey of 116 College Communities", Educational Testing Service, Berkeley (1973).

6. P. L. Dressel and M. M. Thompson, "Independent Study", Jossey-Bass, San Francisco (1973).

7. J. Hall, "Empire State College", Engineering Education, V. 63, No. 7, p. 4.6 (April 1973).

APPENDIX

Empire State College of the State University of New York opened in the fall of 1971, and has worked with more than 6,000 students since that time. The college offers B.A., B.S., A.A. and A.S. degrees. It operates year-round, and admits students monthly. Empire State College provides individualized education through a contract learning process, designed to integrate student needs and interests with College objectives. Each student works with a faculty member, called a mentor, to design an individual degree program that suits his or her background, interests and goals. The College recognizes that significant college-level learnings can occur both inside and outside the formal classroom setting, and so grants advanced standing in recognition of prior collegiate and experiential learning. The student prepares a portfolio which analyzes learning experiences for which advanced standing is sought, relates them to the overall degree program, and provides evidence that the learning did indeed take place. It is the degree program, approved by faculty action, which becomes the basis on which learning contracts are built and requests for advanced standing for prior learning are founded. Each learning contract describes the rights and responsibilities of both student and mentor for a designated period of time within the student's overall degree program. A contract may be worked on either full or half time. A full time contract normally assumes that the student will study 36-40 hours a week, while a half time

contract is half that amount. Academic credit awarded for contract learning is determined by contract content, and is stated in terms of contract months. A contract month is defined as four full time weeks. Contract duration depends on a variety of factors, but is usually between one and four months.

To provide individualized education to students throughout New York State, Empire State is not set up as a traditional "campus". The College has established a network of learning centers, learning units, and special programs, in leased facilities in more than 25 different locations around the state. Empire State College of S.U.N.Y. has become the first non-traditional college to be fully accredited by a regional agency (Middle States). A more complete description of the educational philosophy underlying Empire State College can be found in Engineering Education[7].

Empire State College Learning Contract

STUDENT'S NAME (TYPE LAST NAME FIRST),	SOCIAL SECURITY #	CONTRACT #
ADDRESS STUDENT A	CONTRACT BEGINS ON 6/6/74 / CONTRACT ENDS ON 8/5/74	1 / FULL TIME / HALF TIME X
TELEPHONE: HOME WORK	FOR PERIOD OF 1 MONTHS	EXTERNAL RESOURCES
MENTOR'S NAME (TYPE LAST NAME FIRST)	LEARNING CENTER/ UNIT	

Give detailed description of: (a) Student's General Purposes, plans, or aspirations; (b) Specific Purposes of this Contract; (c) Learning Activities to be undertaken and schedule by which they will be pursued; and (d) methods and criteria for Evaluation. Use the underlined as headings for the four sections of the Contract, and attach additional pages as necessary.

GENERAL PURPOSES:

My objective is to obtain a Bachelor of Science degree with a concentration in Chemistry. I have an A.A.S. degree in Chemistry and nine years of field experience, the last two years of which have been as a quality control laboratory supervisor for a small company ($4 million gross annual sales).

SPECIFIC PURPOSES:

In my present job, I deal constantly with spectrographic instrumentation. I understand and can interpret the data that results from my analytical testing to the point where I can supervise the control of manufacturing processes at my company.

I would now like to increase my understanding of some of the theoretical bases of spectroscopy. Specifically, I would like to investigate:

a. the electronic structure of atoms;

b. the electronic and molecular origins of spectra;

c. elementary quantum theory.

LEARNING ACTIVITIES:

1. I will use Perspectives of Modern Physics, by Arthur Beiser, as a basic reference. I will read at least chapters 3-6 and 10-14. I will provide written solutions to a series of problems on each topic selected by my mentor. In addition, I will use portions of other texts to supplement the material covered in Beiser. I will meet with my mentor biweekly to review my progress with the problems and to discuss the material.

2. Based on the material that I cover above, I will try to interpret the origins of several spectra from my own laboratory at my place of employment. I will provide one spectral analysis, including electronic

Use this form as the first page of each learning Contract. When signed, the original copy is to be filed in the student's Learning Center File; send one copy to the Vice President for Academic Affairs in Saratoga Springs.	SIGNATURES	DATE
	STUDENT	
	MENTOR	
	ASSOC. DEAN	

interpretations of most of the lines observed, by July 2, 1974. Depending upon the complexity of the first analysis, I will try to provide at least two additional spectral analyses of different materials during the second month of this contract.

EVALUATION:

1. My problem solutions will be evaluated by my mentor on the basis that I have correctly applied the theoretical material covered in Beiser. During the biweekly discussions, I will be able to explain and elaborate on the theory as necessary to support my problem solutions.

2. My spectral analyses will be evaluated by my mentor on the basis that I have correctly identified the transitions responsible for each line chosen.

EMPIRE STATE COLLEGE SARATOGA SPRINGS, NEW YORK 12866

CONTRACT DIGEST AND EVALUATION

Student STUDENT A S.S. # Contract # 1 Status HT

Mentor L.C./Unit Date of Contract 6/6/74 to 8/5/74

Months of Credit Earned 1

I. PURPOSE OF CONTRACT AND SPECIFIC TOPICS:

In order to increase his understanding of the theoretical bases of spectroscopy, Mr. in this contract, sought to investigate the theory of the electronic structure of atoms, the electronic and molecular origins of spectra, and elementary quantum theory. To this end, he:

A. Read chapters 3-6 and 10-14 in Perspectives of Modern Physics, A. Beiser, as well as supporting material in other texts;

B. Carried out written solutions to a variety of assigned problems from Beiser, based on his readings;

C. Applied the theoretical material covered in Beiser to an analysis of several spectra obtained from his own laboratory at his place of employment.

II. EVALUATIVE CRITERIA AND METHODS:

The student and the mentor met biweekly to review progress with the problems and to discuss the material.

A. Problem solutions were evaluated by the mentor on the basis of correct application of theoretical material covered in Beiser.

B. Discussions with the mentor were based upon the student's explanation and elaboration of the theory as necessary to support problem solutions.

C. Spectral analyses were evaluated by the mentor on the basis of correct identification of the transitions responsible for each line chosen.

III. MENTOR EVALUATION:

This contract has been completed very satisfactorily. Mr. completed all activities, and his overall work was excellent. He supported his readings in Beiser with relevant sections from the following:

Introduction to Modern Physics, C.H. Blanchard, C.R. Burnett, R.G. Stoner and R.W. Weber
Modern Physics for Engineers, O. Oldenberg and N.C. Rasmussen
Introduction to Modern Physics, F.K. Richtmyer, E.H. Kennard and T. Lauritsen
Modern Physics, F.W. Van Name, Jr.
Physics of the Atom, M. Russell Wehr and J.A. Richards, Jr.

SIGNATURES:

Student Date Dean

Mentor Date Date

EMPIRE STATE COLLEGE SARATOGA SPRINGS, NEW YORK 12866

CONTRACT DIGEST AND EVALUATION

Student STUDENT A S.S. # Contract # 1 Status HT

Mr. carried out solutions to all problems assigned, and to many not assigned. His solutions were usually clear, demonstrating his understanding of the theory. We focussed our discussions on those areas where he had difficulty. The breadth of his readings on each topic greatly assisted our discussions.

The spectra from his laboratory provided a take-off point for a lively discussion of application of the theory. Mr. provided interpretation in correct notation of the origins of most of the lines observed, in the form of computations, comparisons with handbook values, and written analysis. Virtually all of his interpretations were correct, with the few incorrect ones again providing the focus for discussion.

Mr. has provided strong evidence during the course of this contract of a thorough undergraduate level understanding of the modern theory of origins of spectra.

Empire State College Learning Contract

STUDENT'S NAME (TYPE LAST NAME FIRST)	SOCIAL SECURITY #	CONTRACT #
ADDRESS STUDENT B	CONTRACT BEGINS ON 1/27/75	CONTRACT ENDS ON 3/21/75
TELEPHONE: HOME WORK	FOR PERIOD OF 1 MONTHS	EXTERNAL RESOURCES
MENTOR'S NAME (TYPE LAST NAME FIRST)	LEARNING CENTER/ UNIT	

2

FULL TIME

HALF TIME X

Give detailed description of: (a) Student's General Purposes, plans, or aspirations; (b) Specific Purposes of this Contract; (c) Learning Activities to be undertaken and schedule by which they will be pursued; and (d) methods and criteria for Evaluation. Use the underlined as headings for the four sections of the Contract, and attach additional pages as necessary.

GENERAL PURPOSES:

I have worked for the County Highway Department since March, 1960. I have held my present title of Assistant Engineer for the past eight years. If I were applying for this position today, I would have to be a graduate Civil Engineer with at least two years of experience.

My goal at Empire State College is to obtain a B. S. degree with a concentration in Civil Engineering Technology. I would also like to broaden my background in the social sciences and in management. At present, I intend to stay in County employment, but I would like to expand my options for movement in the future.

SPECIFIC PURPOSES:

I would like to study the basic principles and techniques of community and urban planning. Specifically, I would like to consider

1. the origins of community and urban planning;
2. the ways in which governments have aided the course of planning;
3. the ways in which planning decisions are implemented;
4. future directions suggested by planners.

LEARNING ACTIVITIES:

I will carry out a comprehensive series of readings in urban and community planning. I will read the following:

Urban Design: The Architecture of Towns and Cities, Paul D. Spreiregen, A.I.A. (1965)
Urban Planning and Municipal Public Policy, Donald H. Webster (1952)
Urban Planning in Transition, Ernest Erber (1970)
Dilemmas of Urban America, Robert C. Weaver (1965)
How to Save Urban America, William A. Caldwell (1973)

Use this form as the first page of each learning Contract. When signed, the original copy is to be filed in the student's Learning Center File; send one copy to the Vice President for Academic Affairs in Saratoga Springs.	SIGNATURES	DATE
	STUDENT	
	MENTOR	
	ASSOC. DEAN	

Empire State College Learning Contract

Student's Name STUDENT B SS# Status HT

I will write a comprehensive review paper containing three major sections:

1. History and the influence of government on planning;

2. Planning, implementation of planning, and urban renewal;

3. New trends in urban planning in the 1970's.

I will meet with my mentor and my tutor, periodically during my work to assist me in assessing my progress. I will submit a draft of each section, in order, to my tutor by February 14, March 7 and March 21.

EVALUATION:

My paper will be evaluated by my tutor using the following guidelines:

1. That I have identified and understood the major problems of urban and community planning through history;

2. That I have identified and assessed the various approaches to implementation of planning decisions;

3. That I have analyzed the significant trends in urban planning.

EMPIRE STATE COLLEGE SARATOGA SPRINGS, NEW YORK 12866

CONTRACT DIGEST AND EVALUATION

Student STUDENT B S.S. # Contract # 2 Status HT

Mentor L.C./Unit Date of Contract 1/27/75 to 3/21/75

Months of Credit Earned 1 month

I. PURPOSE OF CONTRACT AND SPECIFIC TOPICS:

In this contract, Mr. studied the basic principles and techniques of community and urban planning. Specifically, he considered

A. the origins of community and urban planning;
B. the ways in which governments have aided the course of planning;
C. the ways in which planning decisions are implemented;
D. future directions suggested by planners.

He read the following materials:

Shelter and Society, Paul Oliver
RSVP Cycles, Lawrence Haprin
After the Planners, Robert Goodman
Urban Design: The Architecture of Towns and Cities, Paul D. Spreiregen
Urban Planning and Municipal Public Policy, Donald H. Webster (1952)
Urban Planning Transition, Ernest Erber (1970)
Dilemmas of Urban America, Robert C. Weaver (1965)
How to Save Urban America, William A. Caldwell (1973)

Based on the above readings, he wrote a comprhensive review paper containing three major sections:

A. History and influence of government on planning;

B. Planning, implementation of planning and urban renewal;

C. New trends in urban planning in the 1970's.

II. EVALUATIVE CRITERIA AND METHODS:

Mr. met periodically with me and with a tutor, of County Community College, to assist him in assessing progress, and to discuss the drafts of each section of his paper at their scheduled submission times. Ms. evaluated his paper using the following guidelines:

A. That he had identified and understood the major problems of urban and community planning through history;

B. That he had identified and assessed the various approaches to implementation of planning decisions;

SIGNATURES:

Student Date Dean

Mentor Date Date

C. That he had analyzed the significant trends in urban planning.

III. MENTOR EVALUATION:

Mr. has completed this contract successfully. His discussion and analysis of the readings presented in his paper demonstrate a broad understanding of the material.

He has contrasted in his paper a number of important points from the readings with a wide variety of local examples of planning opportunities seized or missed. His tutor wrote in her evaluation, in part,

> "Mr. comprehensive review paper...is an excellent survey of the origins of urban planning, the role of government in planning. He has organized his material in a clear and logical manner and has carefully detailed the many factors which need to be taken into account when considering an urban plan. His presentation of federal and state legislation with regard to zoning and housing provides a good framework within which to study the role of the urban planner and the community.
>
> Mr. has included a great deal of illustrative material used as specific examples of ways in which cities and towns cope with particular problems. In discussing the origins of city planning, Mr. has included the City Beautiful movement, Le Corbusier's plans, and Radburn, New Jersey. These are radically different approaches to city planning, and he has delineated them carefully. He provides an especially good discussion of Le Corbusier's Ville Radieuse of 1922, in which towers concentrated such masses of people that there could be high density of people per acre as well as lots of open space. He shows how this approach became 'standard design' for every kind of big housing project, with the result that the projects became cut off from the life of the city, and the open spaces became green areas which were carefully chained off. He points out that, as Jane Jacobs has stated, Urban Renewal designs have often destroyed neighborhoods and ignored the importance of street life.
>
> Mr. stresses the fact that planners must concentrate on grass roots problems, and must focus upon what people want. He presents a good discussion of advocacy planning and other citizen participation programs. He mentions several examples of settlements where people have designed their own environments and built for themselves.
>
> He ends his paper with a quote from Tofler's Future Shock, which he feels expresses his position with regard to city planning:
>
> > 'We need to initiate a continuing plebiscite on the future. On the edge of a new millenium, on the brink of a new stage in human development, we are racing blindly into the future. But where do we want to go?' "

Empire State College Learning Contract

STUDENT'S NAME (TYPE LAST NAME FIRST)	SOCIAL SECURITY #	CONTRACT #
STUDENT C		
ADDRESS	CONTRACT BEGINS ON: 1/6/75	CONTRACT ENDS ON: 3/28/75
	FULL TIME	HALF TIME X
TELEPHONE: HOME WORK	FOR PERIOD OF 1½ MONTHS	EXTERNAL RESOURCES
MENTOR'S NAME (TYPE LAST NAME FIRST)	LEARNING CENTER/ UNIT	

Give detailed description of: (a) Student's General Purposes, plans, or aspirations; (b) Specific Purposes of this Contract; (c) Learning Activities to be undertaken and schedule by which they will be pursued; and (d) methods and criteria for Evaluation. Use the underlined as headings for the four sections of the Contract, and attach additional pages as necessary.

GENERAL PURPOSES:

I have been working in the field of communications electronics for fourteen years; most of it for Co. in technical and supervisory positions. Last year I began a new career path in data processing within my company. I have become very interested in the field, and would therefore like to obtain a B.S. degree with a concentration in computer science.

SPECIFIC PURPOSES:

1. I would like to become more familiar with the field of computer science. I would therefore like to explore, in a broad and general sense, the areas within the field in order to assist me in determining the nature of my future studies.

2. I would like to become familiar with Assembler computer language. Specifically, I am interested in

   a. becoming familiar with the symbolic coding appropriate to the assembly process;

   b. learning the definitions and techniques necessary for assembler language coding;

   c. demonstrating that I can code an assembler program.

LEARNING ACTIVITIES:

1. a. I will conduct a series of interviews with experienced professionals in a variety of areas within the field of data processing. I will develop and use a questionnaire directed towards determining the competencies expected of a professional in the field.

Use this form as the first page of each learning Contract. When signed, the original copy is to be filed in the student's Learning Center File; send one copy to the Vice President for Academic Affairs in Saratoga Springs.	SIGNATURES	DATE
	STUDENT	
	MENTOR	
	ASSOC. DEAN	

b. I will research the offerings of a number of college computer science departments, in order to determine the general scope of preparation for the field provided by colleges.

c. I will research a variety of trade publications within the field of data processing. I will especially seek out indications of future directions and trends within the field.

d. I will write a paper that will include an analysis of the results of my interviews, and a comparison of these results with what I find in college catalogs and trade publications. Based on this, I will propose a list of competencies to be submitted for my concentration.

2. I will take the IBM course, Assembler Language Coding. The course consists of four volumes in P.I. format, and are described in the appendix. I will utilize the computer facility at Co. in , New York, for diagnostic listings of source programs.

EVALUATION:

1. My mentor will evaluate my paper on the basis that

   a. I have included adequate information for each of the three approaches taken;

   b. My proposed competency list is logical and appropriate based upon the information presented.

2. I will take and successfully pass the final examination given by IBM. The examination will consist of a coding exercise in which I will demonstrate my knowledge of Assembler language by coding portions of a problem that already has been flowcharted. Verification of my successful passage of the final examination will be provided by Mr. coordinator of education and training, Operations Department, Division, IBM Corporation.

EMPIRE STATE COLLEGE SARATOGA SPRINGS, NEW YORK 12866

CONTRACT DIGEST AND EVALUATION

Student STUDENT C S.S. # Contract # 1 Status HT

Mentor L.C./Unit Date of Contract 1/6/75 to 3/28/75

Months of Credit Earned 1½

Purpose of Contract and Specific Topics:

In this, his first contract, Mr. had two purposes.

A. Since he had recently begun a job in the field of data processing, and since he desires to concentrate his study at ESC in the area of computer science, he wanted to explore the area in order to assist in determing the nature of his future studies. To this end, he

1. Conducted a series of interviews with experienced professionals in a variety of areas in the data processing field. He developed and used a questionnaire directed towards the determination of the competencies expected of a professional in the field.

2. He researched the offerings of a number of college computer science departments, in order to determine the general scope of preparation for the field provided by colleges.

3. He researched a variety of trade publications within the field of data processing to seek out indications of future directions and trends within the field.

4. He wrote a paper that included an analysis of the results of his interviews, and a comparison of these results with what he found in college catalogs and trade publications. Based on this, he proposed a list of competencies to be submitted for his degree program concentration.

B. He desired to become familiar with Assembler computer language. Specifically, he took the IBM course Assembler Language Coding, consisting of four volumes in P.I. format. He utilized the computer facility at in , New York, for diagnostic listings of source programs.

Methods of Evaluation:

A. Mr. and I met periodically to discuss the progress of his search. His paper was evalauted on the basis that

1. he had included adequate information for each of the three approaches taken;

SIGNATURES:

Student Date Dean

Mentor Date Date

2. the proposed competency list was logical and appropriate based upon the information presented.

B. Mr. took and sucessfully passed a final examination given by IBM, which tested his familiarity with the symbolic coding appropriate to the assembly process, as well as his knowledge of the definitions and techniques necessary for assembler language coding. The examination consisted of a coding exercise designed to permit him to demonstrate his knowledge of Assembler language by coding portions of a problem which already had been flowcharted. Verification of successful passage of the examination was provided by coordinator of education and training, Operations department Division, IBM Corporation.

Mentor Evaluation:

In the first part of this contract, Mr. carried out a project that was , for him, a useful and effective exploration of the needs of his career field. His interview questionnaire focussed on the education and job training needs of the computer field. The responses of the operators, programmers, analysts, and systems managers whom he interviewed were clearly slanted toward their own particular positions, but taken as a whole they provided a broad look at a large part of the field.

In his paper he effectively integrated the results of his interviews with an analysis of a number of college computer science department course offerings, as with two apparent industry "trends" (the moves towards "network" information handling processes and smaller single application systems) gleaned from trade magazines. The result was a list of general competencies that he believed to be broadly appropriate for a bachelor degree level concentration in computer science. He will utilize the list to assist in the design of his degree program.

Mr. carried out all of the required parts of the Assembler Language Coding course. His successful completion of the course and passing grade on the final examination was verified by Mr. of the IBM corporation.